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10/009,369	06/06/2002	James H. Crowell	CJL 301A2	2183

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EXAMINER	
SAFAVI, MICHAEL	
ART UNIT	**PAPER NUMBER**
3673	

DATE MAILED: 10/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/009,369	CROWELL, JAMES H.	
	Examiner	Art Unit	
	M. Safavi	3673	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *29 July 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *27-46 and 52-55* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *27-46 and 52-55* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "capping member interconnecting the rafter component to a corresponding column", (claim 55), the "rafter component... [having] an internal criss-cross structure", (claim 54), the "rafter component having internal diagonal rigidifying support structure", (claim 27), must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "108" as well as reference character "118" appear to designate a plurality of different elements of the invention, (reference numeral 108 in Figs. 17, 19, and 20 and reference numeral 118 in Figs. 17, 19, and 21). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 27-46 and 52-55 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application

was filed, had possession of the claimed invention. The specification does not appear clear and complete as to "a rafter component having internal diagonal rigidifying support structure, wherein the rafter component has four substantially orthogonal sides and a plurality of external hook structures for interconnecting frame members to at least...[four] of the sides" as now appears in claims 27 and 52-55. The specification does not appear clear and complete as to "capping member interconnecting the rafter component to a corresponding column" as now appears in claim 55.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 27-36, 38-40, 44-46, and 52-55 are rejected under 35 U.S.C. 102(b) as being anticipated by De Zen. De Zen discloses, Figs. 1-15, plastic modular building components, including columns and rafter components 8, 9, 2, 3, 26, 27, 37, 45, 58, 80, 8', 9', 35' configured to interconnect the modular building components, wherein the modular building components are extruded from a polymer material, and wherein the

connector elements have hook-like structures 15, 16, 19, 20, 28, 30, 38, 41, 42, 60 configured to slide or snap into interlocking engagement with corresponding hook-like structures on other building components to permit relative rotational and translational motion between building components and to permit connection along four sides thereof. The rafter components have internal diagonal rigidifying support structure at 46, 47 for example. The configuration of the De Zen building would inherently shift in response to a change in ambient temperature and/or externally applied loads such that the building increases or decreases in size. The De Zen connector elements would inherently respond adaptively, selectively, and dynamically with respect to an externally applied load to create load bearing paths through the building between the point of application of the externally applied load and the ground. Connection features of all buildings would allow for such. Otherwise, the claims do not specifically set forth any feature serving to differentiate from the applied prior art. For example, each of claims 29-34, 45, and 46 appear to merely recite desired effect or consequence. An internal way can be seen in Figs. 3-11, for example. Such internal way would constitute a "venturi system" enabling air to flow into and out of the building. Otherwise, an "air-flow venturi system" is, more or less, present in any habitable building structure. Foundation that generally increases in lateral dimension is at 6 with jacketing along 6'. De Zen includes panel structures floatingly connected to a frame structure using the connector elements, (see at least Fig. 3 or 4, for example), such that an externally applied load may be transmitted between the panel structures and frame structure in an adaptive and intermittent manner according to the nature, size, and direction of the externally applied load.

Claims 27-36, 44-46, and 52-55 are rejected under 35 U.S.C. 102(e) as being anticipated by Haag. Haag discloses, Figs. 1-12, plastic modular building components, (formed by extrusion), including columns and rafter components 11, 13, 44, 45, configured to interconnect the modular building components, wherein the modular building components are extruded from a polymer material, and wherein the connector elements have hook-like structures 25, 41, 221, 222 for example, configured to slide or snap into interlocking engagement with corresponding hook-like structures on other building components to permit relative rotational and translational motion between building components and to permit connection along four sides thereof. The rafter components have internal diagonal rigidifying support structure at 90, for example. The configuration of the Haag building would inherently shift in response to a change in ambient temperature and/or externally applied loads such that the building increases or decreases in size. The Haag connector elements would inherently respond adaptively, selectively, and dynamically with respect to an externally applied load to create load bearing paths through the building between the point of application of the externally applied load and the ground. Connection features of all buildings would allow for such. Otherwise, the claims do not specifically set forth any feature serving to differentiate from the applied prior art. For example, each of claims 29-34, 45, and 46 appear to merely recite desired effect or consequence. An internal way can be seen in Figs. 1, 3, 7, and 12, for example. Such internal way would constitute a "venturi system" enabling air to flow into and out of the building. Otherwise, an "air-flow venturi system" is, more or less, present in any habitable building structure. Haag includes panel structures

floatingly connected to a frame structure using the connector elements, (see Figs. 1-3 and 7), such that an externally applied load may be transmitted between the panel structures and frame structure in an adaptive and intermittent manner according to the nature, size, and direction of the externally applied load.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claim 37 is rejected under 35 U.S.C. 103(a) as being unpatentable over De Zen.

Examiner takes official notice that water tanks are old and well known in the building art, (to provide hot water, for example). Thus, it would have been obvious for one of ordinary skill in the art to have provided the De Zen structure with a water tank, as on or along the foundation, thus allowing for daily use of water as necessary within the De Zen structure.

Claim 37 is rejected under 35 U.S.C. 103(a) as being unpatentable over Haag.

Examiner takes official notice that water tanks are old and well known in the building art, (to provide hot water, for example). Thus, it would have been obvious for one of ordinary skill in the art to have provided the Haag structure with a water tank, as

on or along the foundation, thus allowing for daily use of water as necessary within the Haag structure.

Claims 27-46 and 52-55 are rejected under 35 U.S.C. 103(a) as being unpatentable over Donlon in view of either of De Zen and Haag.

Donlon discloses, Figs. 1-7, plastic modular building components, including columns and rafter components 15, 12 configured to interconnect the modular building components, wherein the modular building components are extruded from a polymer material, and wherein the connector elements have hook-like structures 31, 37 configured to slide or snap into interlocking engagement with corresponding hook-like structures on other building components to permit relative rotational and translational motion between building components. The configuration of the Donlon building would inherently shift in response to a change in ambient temperature and/or externally applied loads such that the building increases or decreases in size. The Donlon connector elements would inherently respond adaptively, selectively, and dynamically with respect to an externally applied load to create load bearing paths through the building between the point of application of the externally applied load and the ground. Connection features of all buildings would allow for such. Otherwise, the claims do not specifically set forth any feature serving to differentiate from the applied prior art. For example, each of claims 29-34, 45, and 46 appear to merely recite desired effect or consequence. An internal way can be seen in Figs. 3, 5, and 6, for example. Such internal way would constitute a "venturi system" enabling air to flow into and out of the

building. Otherwise, an "air-flow venturi system" is, more or less, present in any habitable building structure. Foundation that generally increases in lateral dimension is at 11 with jacketing along 45/49 and vertically adjustable foot structure 23/46 having elongate vertically adjustable components 42 to level the foundation structure. Donlon includes panel structures floatingly connected to a frame structure using the connector elements, (see 15 connected to 14 via 12 in Fig. 4), such that an externally applied load may be transmitted between the panel structures and frame structure in an adaptive and intermittent manner according to the nature, size, and direction of the externally applied load.

Arguments to each of De Zen and Haag can be found above. To have provided the Donlon structural components system with any of the components bearing hooks 37 along any of the sides thereof, thus allowing versatile connection as may be necessary, as well as provide the Donlon components 15 with diagonal rigidifying support structure, thus providing for enhanced structural integrity, would have been obvious to one having ordinary skill in the art at the time the invention was made as taught by either of De Zen and Haag.

A for claim 37, Examiner takes official notice that water tanks are old and well known in the building art, (to provide hot water, for example). Thus, it would have been obvious for one of ordinary skill in the art to have provided the Donlon structure with a water tank, as on or along the foundation, thus allowing for daily use of water as necessary within the Donlon structure.

Claims 27-46 and 52-55 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wolfe in view of either of De Zen and Haag.

Wolfe discloses, Figs. 1, 3B, 2D, 3D, 4B, 4C, 5D,and 7, plastic modular building components, (formed by extrusion), including columns and rafter components 50, 70, 43, 230/330, 200 configured to interconnect the modular building components, wherein the modular building components are extruded from a polymer material, and wherein the connector elements have hook-like structures 232, 242 or 34, 41/42 or 93, 331, for example, configured to slide or snap into interlocking engagement with corresponding hook-like structures on other building components to permit relative rotational and translational motion between building components. The configuration of the Wolfe building would inherently shift in response to a change in ambient temperature and/or externally applied loads such that the building increases or decreases in size. The Wolfe connector elements would inherently respond adaptively, selectively, and dynamically with respect to an externally applied load to create load bearing paths through the building between the point of application of the externally applied load and the ground. Connection features of all buildings would allow for such. Otherwise, the claims do not specifically set forth any feature serving to differentiate from the applied prior art. For example, each of claims 29-34, 45, and 46 appear to merely recite desired effect or consequence. An internal way can be seen in Figs. 1A, 2A, 4B, 4C, and 7, for example. Such internal way would constitute a "venturi system" enabling air to flow into and out of the building. Otherwise, an "air-flow venturi system" is, more or less, present in any habitable building structure. Wolfe includes panel

structures floatingly connected to a frame structure using the connector elements, (see 30 connected to 43 via 37 in Fig. 4B), such that an externally applied load may be transmitted between the panel structures and frame structure in an adaptive and intermittent manner according to the nature, size, and direction of the externally applied load.

Arguments to each of De Zen and Haag can be found above. To have provided the Wolfe structural components system with any of the components 43, 230/330, 200 bearing hooks along any of the sides thereof, thus allowing versatile connection as may be necessary, as well as provide the Wolfe components 50, 70 for example, with diagonal rigidifying support structure, thus providing for enhanced structural integrity, would have been obvious to one having ordinary skill in the art at the time the invention was made as taught by either of De Zen and Haag.

A for claim 37, Examiner takes official notice that water tanks are old and well known in the building art, (to provide hot water, for example). Thus, it would have been obvious for one of ordinary skill in the art to have provided the Wolfe structure with a water tank, as on or along the foundation, thus allowing for daily use of water as necessary within the Wolfe structure.

Response to Arguments

Applicant's arguments with respect to claim 27 have been considered but are moot in view of the new ground(s) of rejection. However, one having ordinary skill in the art at the time the invention was made would have found it obvious to have formed the

Donlon or Wolfe components with various hook connectors as well as diagonal stiffeners when viewing either of De Zen and Haag. The examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988)and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, one having ordinary skill in the art when considering either of De Zen or Haag would have realized that hook connections provide a more complete attachment while diagonal stiffeners would provide enhanced structural integrity.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to M. Safavi whose telephone number is (571) 272-7046. The examiner can normally be reached on Mon.-Thur., 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Heather Shackelford can be reached on (571) 272-7049. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

M. Safavi
October 05, 2005

MICHAEL SAFAVI
PRIMARY EXAMINER
ART UNIT 354